



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,841	11/13/2003	Rajesh Sundaram	ITL.1062US (P17921)	2553
21906	7590	09/16/2005	EXAMINER	
TROP PRUNER & HU, PC 8554 KATY FREEWAY SUITE 100 HOUSTON, TX 77024			LE, THONG QUOC	
		ART UNIT	PAPER NUMBER	
		2827		
DATE MAILED: 09/16/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

H-1

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/713,841	SUNDARAM ET AL.
	Examiner Thong Q. Le	Art Unit 2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 05 July 2005.

2a) This action is **FINAL**.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-5,7,9-11,13-19,22-25 and 27-33 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-5,7,9-11,13-19,22-25 and 27-33 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 4)  Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5)  Notice of Informal Patent Application (PTO-152)  
 6)  Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Amendment filed on 07/05/2005 has been entered.
2. Claims 1-5, 7,9-11,13-19,22-25, 26-33 are presented for examination.

***Response to Arguments***

3. Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5,7,9-11,13-19,31 are rejected under 35 U.S.C. 102(b) as being anticipated by Tomishima et al. (U.S. Patent No. 5,870,348).

Regarding claim 1, Tomishima et al. disclose a method comprising:

supplying a negative voltage (ABSTRACT, Vbb, Column 13, lines 34-35) to at least one deselected wordline of a memory array from a decoder (Column 13, lines 34-35, WL0) coupled to the at least one deselected wordline (Figure 1, deselected wordline is supplied by negative voltage Vbb) ; and

providing the negative voltage (Figure 1, 11) and a control negative voltage (Figure 1, 3, Column 13, lines 6-15, lines 43-67, Column 14, lines 1-17, lines 62-65) to the decoder.

Regarding claims 2-5,7,9, Tomishima et al. disclose further comprising a positive voltage to a selected wordline of the memory array to program the selected wordline while supplying the negative voltage (ABSTRACT, V<sub>pp</sub>), and further comprising supplying the negative voltage to all wordlines of the memory array except the selected wordline (Column 13, lines 64-67, Column 14, lines 1-4), and providing a second positive voltage signal to a selected bitline of the memory array (Column 2, lines 42-65, V<sub>cc</sub>/2 > 0 supplied to bitline of selected memory cell, Column 7, lines 18-20), and further comprising reducing a leakage current through at least one deselected cell coupled to the selected bitline of the memory array (Column 7, lines 39-42), and further comprising providing the control negative voltage (Figure 1, V<sub>bb</sub> coupled at D node of 40) to a substrate of a transistor of the decoder coupled to pass the negative voltage to the at least one deselected wordline (Figure 1, Column 13, lines 23-35), and further comprising supplying the negative voltage to the deselected wordline during a first time period (Column 13, lines 6-16), and supplying a positive voltage to the same wordline during a second time period to program at least one memory c-ells cell coupled thereto (Column 14, lines 13-46).

Regarding claims 10-11,13-19, 31, Tomishima et al. disclose a decoder (Figure 1) to supply a negative voltage (V<sub>bb</sub>) to a deselected address line of a memory array (ABSTRACT), the decoder comprising a first transistor (Figure 1, N3, V<sub>bb</sub>) coupled to receive a negative control voltage (Figure 1, 3) and the negative voltage and to pass the negative voltage to the deselected address line (ABSTRACT).

More specifically, Tomishima et al. disclose wherein the decoder is further coupled to supply a positive voltage (Figure 1, V<sub>pp</sub>) to the same address line if it is selected to be programmed (Figure 1, Column 14, lines 5-49), and a second second transistor coupled to the first transistor and deselected address line to pass a program pulse to the deselected address line if it becomes a selected address lines (Figure 30, Column 33, lines 13-33), and comprising a pre-driver circuit to disable the first transistor if deselected address line becomes a selected address line (Figure 1, N2, Column 4, lines 7-13), and a plurality of memory cells coupled to the decoder via the deselected address line (Column 14, lines 1-4), and memory cells is a flash memory (Figure 3).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 22-25, 27-30,32-33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tomishima et al. (U.S. Patent No. 5,870,348).

Tomishima et al. as described above, fail to disclose a wireless interface coupled to the memory array. Since a wireless interface coupled to a device is an optional. It is would have been obvious to a person of ordinary skill in the art to control a memory device by a wireless system. Applicant has not disclosed that a wireless interface

provides for solve a state problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with claims 10-11,13-19,31 of present application or invention of Tomishima et al.

Therefore, it would have been obvious to person of ordinary skill in this art to modify memory device of Tomishima et al. by coupling a wireless interface to memory device to obtain the invention as specified in claim 22.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Le whose telephone number is 571-272-1783. The examiner can normally be reached on 8:00am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoai V. Ho can be reached on 571-272-1777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Le  
Primary Examiner  
Art Unit 2827

**THONG LE**  
**PRIMARY EXAMINER**